ABSTRACT OF INVENTION

Improved method of and apparatus for aggregating data elements in multidimensional databases (MDDB). In one aspect of the present invention, the apparatus is realized in the form of a high-performance stand-alone (i.e. external) aggregation server which can be plugged-into conventional OLAP systems to achieve significant improments in system performance. In accordance with the principles of the present invention, the stand-alone aggregation server contains a scalable MDDB and a high-performance aggregation engine that are integrated into the modular architecture of the aggregation server. The stand-alone aggregation server of the present invention can uniformly distribute data elements among a plurality of processors, for balanced loading and processing, and therefore is highly scalable. The stand-alone aggregation server of the present invention can be used to realize (i) an improved MDDB for supporting on-line analytical processing (OLAP) operations, (ii) an improved Internet URL Directory for supporting on-line information searching operations by Web-enabled client machines, as well as (iii) diverse types of MDDB-based systems for supporting real-time control of processes in response to complex states of information reflected in the MDDB. In another aspect of the present invention, the apparatus is integrated within a database management system (DBMS). The improved DBMS can be used to realize achieving a significant increase in system performance (e.g. deceased access/search time), user flexibility and ease of use. The improved DBMS system of the present invention can be used to realize an improved Data Warehouse for supporting on-line analytical processing (OLAP) operations or to realize an improved informational database system, operational database system, or the like.